A NEW PROCEDURE TO DEAL WITH THE MACROECONOMIC IMBALANCE IN THE EUROPEAN UNION

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Abstract: *The objective of the presented paper is, in the first place, to look into the solution of current serious macroeconomic problems of member states of the European Union by laying down a new enforcement mechanism described in the Alert Mechanism Report (AMR). In recent years distinctive and persistent macroeconomic imbalances have accumulated that are reflected in high and persistent external deficits and surpluses, in the persistent loss of competitiveness, in the dramatic increase in indebtedness and in the increase in real estate bubbles, which were one of the causes of the current financial crisis. Macroeconomic problems of the European Union's economies are dealt with in the very AMR, which defines a new procedure for the prevention and reformation of macroeconomic dysfunctions. Based on compliance with ten selected indicators according to determined threshold values those economies are identified that are liable to undergoing various macroeconomic imbalances in years to come. In the end the paper uses selected statistic methods, namely cluster analysis, to look into the mentioned indicators of external imbalances and competitiveness and imbalances inside an economy in question. The article focuses on the analysis of the created clusters according to their similarity in the development of the mentioned macroeconomic indicators and on the assessment of the conclusions of the EU commission.*

Keywords: *Macroeconomic imbalances, Internal imbalances, External imbalances, Excessive Imbalance Procedure, Alert Mechanism Report.*

JEL Classification: *E6, H6.*

Introduction

In general it is true that the condition for long-term sustainability of the growth of the economy's performance is the mutual bond between the internal and external balance, i.e. the macroeconomic stability. The objectives of the related stabilisation policies for current EU members as well as candidate countries are predetermined by the terms and conditions for the membership in the Economic and Monetary Union (EMU). The internal balance is characterised especially by the price and fiscal stability and moreover by the quality of the domestic financial sector. The internal stability is also the condition for the domestic economy's resistance to external shocks and for the sustainability of the external balance characterised by the balance of the current account [7].

At the moment the economies of the EU are facing serious macroeconomic problems that are demonstrated, besides other things, by the dramatic increase in the overall indebtedness of the economies in question, by increasing unemployment or by a long-term loss of competitiveness.

The paper sets the objective to describe the new and, to a large extent, revolutionary procedure of the EU for the dealing with the macroeconomic imbalance, the so-called Excessive Imbalance Procedure, the crucial part of which is the Alert Mechanism Report, including the main findings of this report. Subsequently, in the end of the paper, the indicators of external imbalances and competitiveness and of the internal imbalances are analysed on the basis of the selected statistical method with the objective to assess the conclusions of the EU's Commission.

The importance of the procedure lies mainly in the implementation of a new surveillance method for the prevention and reformation of macroeconomic imbalances, which makes the procedure a new tool of the extended framework for the administration of the EU's economic issues. The extended surveillance has been adopted in the form of a package of "six legal acts" concerning the administration of economic issues, which determines, among other things, a significant extension of the surveillance over fiscal policies. The surveillance over macroeconomic imbalances forms a self-contained measure for the monitoring of the economic policy's problem that the EU encounters in the course of the providing for fiscal sustainability, competitiveness, the stability of the financial market and the economic growth, and estimates their future development [3].

1 The new surveillance procedure for prevention and reformation of macroeconomic imbalances

The systematic financial crisis, which broke out in 2008, manifested the insufficient attention that had been paid to macroeconomic imbalances and other displays of divergence within the EMU. Lenience towards a disregard in respect to frequent recommendations that have been continuously directed at member countries within the framework of regular multilateral surveillance has proved itself to be wrong. Thus this experience has shown that this surveillance has to be supported with a suitable enforcement mechanism, if it is to be effective.

1.1 The Excessive Imbalance Procedure and the Alert Mechanism Report

In December 2011 the so-called Excessive Imbalance Procedure (EIP) became effective. The starting point of this procedure is the so-called Alert Mechanism Report (AMR) that is compiled by the EU Commission on the basis of consultations with the European Parliament, the European Council and the European Systemic Risk Board.

The objective of this new enforcement mechanism is to identify those member countries that could be facing problems due to various imbalances. For this purpose a scoreboard is compiled that is composed of ten indicators that focus on the area of external imbalances and competitiveness and on the sphere of internal imbalances. For each of these indicators informative threshold values have been set, however these are not defined in a rigid manner in order to be able to highlight existing problems. A detailed description of individual indicators, including selected periods for the calculation of the informative threshold values, is provided in Table 1. The Commission uses these indicators to identify those EU countries that, due to their macroeconomic development, require in-depth analysis and subsequently recommends suitable policies to concerned economies that form the preventive or reformatory part of the task.

Tab. 1: Envisaged indicators and indicative thresholds

External imbalances and competitiveness					
Indicator	3 year average of **current account balance** as a % of GDP	Net International Investment Position **as a** % of GDP	**% change (3 years) of** Real Effective Exchange Rate, HICP deflators relative to 35 industrial countries [a)]	% change (5 years) in **export market shares**	% change (3 years) in **nominal unit labour cost** [b)]
Indicative thresholds	+6/-4% GDP	-35% Lower quartile	*+/-5% for €A +/-11% non €A* Lower and Upper Quartiles of EA - /+ s. d. of EA	-6% Lower quartile	*+9% €A +12% non-€A* Upper quartile €A3 p.p
Period for calculating thresholds	1970 – 2007	First available year (mid-1990s)-2007	1995 – 2007	1995 – 2007	1995 – 2007
Internal imbalances					
Indicator	**y-o-y % change in** deflated house prices [c)]	Private sector credit flow as % of GDP [d), e)]	Private sector debt as % of GDP [d), e)]	General government debt as % of GDP	**3 year average of** unemployment rate
Indicative thresholds	+6% Upper quartile	+15% Upper quartile	160% Upper quartile	+60% GDP	+10%
Period for calculating thresholds		1995 – 2007	1994 – 2007		1994 – 2007

Source: [3]; [9].

(a) for EU trading partners HICP is used while for non-EU trading partners, the deflator is based on a CPI close to the HICP in methodology; (b) index providing ratio of nominal compensation per employee to real GDP per person employed; (c) changes in house prices relative to the consumption deflator of EUROSTAT; (d) private sector is defined as non-financial corporations; households and non-profit institutions serving households; (e) sum of Loans, and Securities other than shares; liabilities, non -consolidated; (f) the sustainability of public finances will *not* be assessed in the context of the EIP given that this issue is already covered by the SGP. However this indicator is part of the scoreboard because public indebtedness contributes to total indebtedness of the country and therefore to the overall vulnerability of the country.

The primary sustainability of public finances is assessed and subsequently dealt with by the Stability and Growth Pact. Still the fiscal imbalance indicator, expressed as the amount of the public debt in proportion to the GDP (in %), is quite rightly included in the scoreboard. The fiscal imbalance of given economies contributes to the overall indebtedness, which has impact on the entire macroeconomic balance. The long-term fiscal imbalance is an insidious phenomenon, because the anonymity of concrete causes of its emergence represents an enormous economic problem with serious not only budgetary, but especially macroeconomic consequences. We should not forget that even though good budgetary discipline belongs among convergence criteria, the fiscal policy is still in the hands of national governments, unlike the monetary policy that is secured by the European Central Bank after a country enters the euro area. The argument for the definition of these convergence criteria was a significantly differing development of macroeconomic figures in individual member states and therefore the opinion that some countries are not sufficiently prepared to meet the requirements of the necessary monetary and fiscal policy was prevailing. At the moment the convergence criteria have come under "expert criticism" because they were determined on the political rather than economic basis, as the development of most economies of the entire EU has shown. The point of these criteria was to ensure that only stabilised countries would become members of the unified monetary union so that the compactness and stability of the euro area would not be threatened – however the rigidity of these criteria and a certain relaxed spirit in meeting them were among the factors that have contributed the today's economic situation in Europe.

The mentioned indicators of macroeconomic balance of the EU's member countries are assessed on the basis of the continuous development, including the predicted development and other relevant indicators.

Besides the named ten indicators, the Commission also pays special attention to an extended set of indicators, which also include nominal and real convergence inside and outside of the EMU as well as the commercial performance and the productivity of labour. [1]

1.2 Conclusions identified by the AMR

The historically first data concerning the mentioned macroeconomic balance, or imbalance as the case may be, of the EU member countries for the year of 2010 were presented by the European Commission on 14th February 2012. [2]

Based on the executed thorough analyses, the Commission had arrived at the conclusion that in some member countries of the EU it would be necessary to carry out a more detailed evaluation of the risk of microeconomic imbalances because these countries were facing various problems and potential risks. The countries concerned

[1] In detail [7].
[2] Data in [7].

were Belgium, Bulgaria, Denmark, Finland, France, Italy, Cyprus, Hungary, Germany, Slovenia, Spain, Sweden and the United Kingdom.

The AMR also provides some surprising information about our economy. Even though the public finances, as one of the important components of the macroeconomic balance, are not considered sustainable from the long-term viewpoint, the Commission is of the opinion that they do not need to be analysed in detail at the moment. Besides the Czech Republic this finding also applies for Estonia, Lithuania, Latvia, Luxemburg, Malta, the Netherlands, Poland, Austria and Slovakia.

It should be pointed out that the AMR does not deal with countries with which a financial aid program has been concluded, i.e. Ireland, Portugal, Romania and Greece, since the mentioned surveillance is already being carried out in these countries.

The EIP takes place according to the procedure defined in advance. After the consultation of the AMR in the Euro Group and in the Informal Economic and Financial Affairs Council (ECOFIN) the Commission will execute extensive analyses of the “selected” countries. If the economic situation of a country “selected” in this way is evaluated as non-problematic the Commission will not take any other further measures, i.e. the procedure will be completed. However if the Commission arrives at the conclusion that there are minor macroeconomic imbalances in such country, the country will receive recommendations aiming to correct or prevent identified imbalances. The last alternative that may occur is that the Commission will declare that there are major imbalances in a country in question that threaten the proper functioning of the EMU. Subsequently the Commission will recommend to the Council that it should start the EIP. If this proposal is approved the concerned country will have to present an action plan for the reformation of imbalances that has to contain clearly formulated measures and concrete deadlines for their implementation. This country will be under the Commission’s extended surveillance and will be obliged to prepare regular reports about the progress of imbalances elimination.

The EIP also contains the option to impose sanctions for the non-fulfilment of prescribed obligations; however this applies only for member countries of the euro area [5].

2 Statistic analyses of the data of the AMR set of criteria concerning the EU’s member countries for 2010

A detailed study of the table of the resulting values of the ten macroeconomic balance indicators for the EU’s economies for the year of 2010 presented in the AMR makes it possible to identify countries with similar achieved values. A question suggests itself whether the presented decision of the Commission really takes into consideration the mentioned wider context of the development of the EU economies, i.e. the continuous development of indicators, the predicted development and possible spillover effects, or whether it is simply based on empirical data.

A multidimensional statistic method has been chosen for the initial analysis – namely cluster analysis that sorts out sets of objects into several relatively homogeneous clusters [6]. Unfortunately this method cannot provide an answer to the hypothesis defined above; however it can classify the EU economies according to defined comparable macroeconomic data.

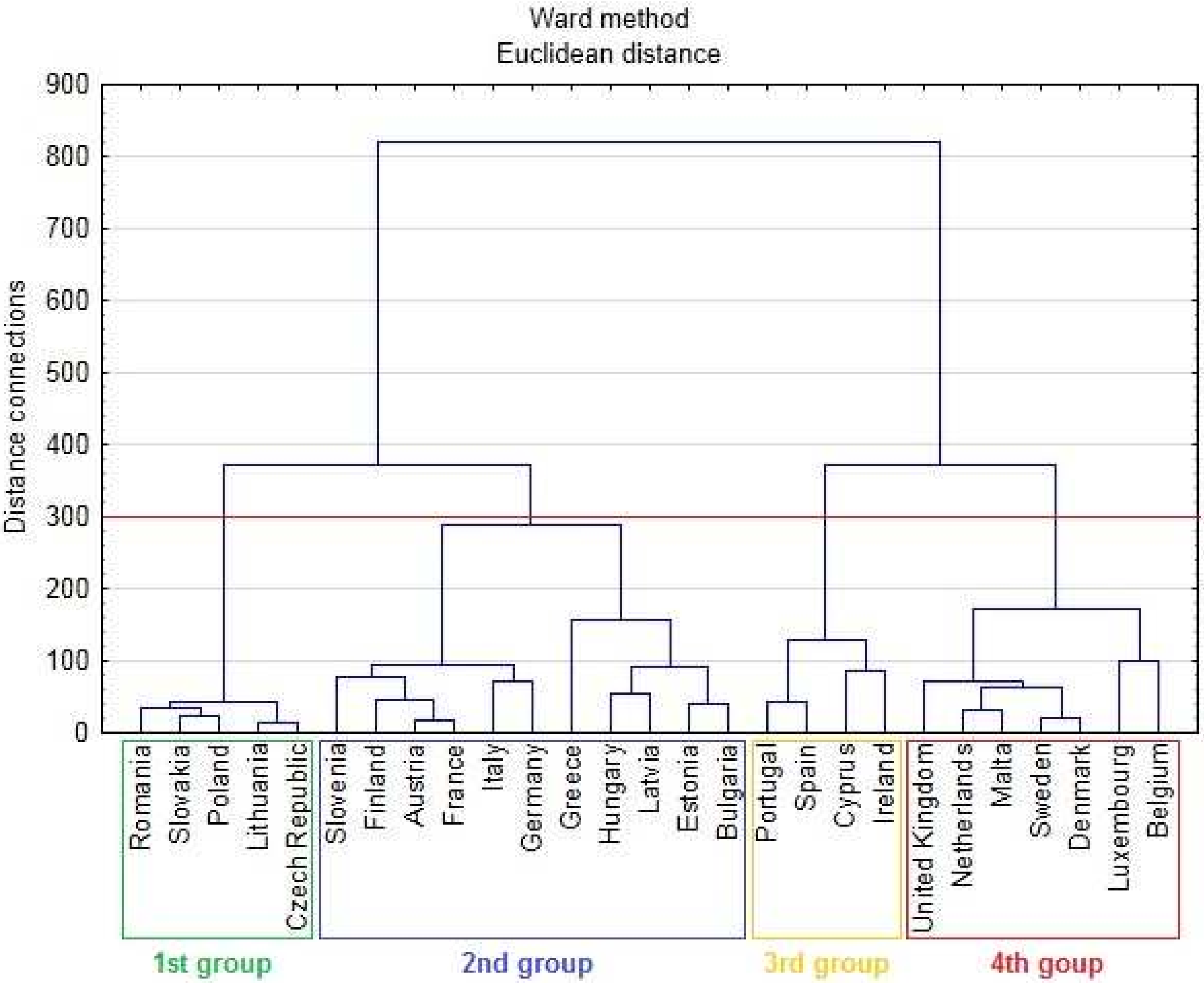
Via the statistic program STATISTICA hierarchical clustering and the Ward's methodology were used to determine groups on the basis of achieved values for all the indicators of the macroeconomic balance indicator set of the EU economies. The Ward's method was identified as suitable for this task because its principle is not optimisation of distances between clusters but the method lies in minimization of the heterogeneity of clusters according to the criterion of the minimal increase in the within-cluster sum total of the squares of deviations of objects from the focus of clusters [8]. The Euclidean distance was used to calculate the distances.

Image 1 interprets in an illustrative manner the results achieved within cluster analysis, i.e. it depicts similarity between EU economies according to the values of the macroeconomic indicators and creates clusters out of them on the basis of this similarity.

The dendrogram shows that the most similar development can undoubtedly be identified with the Czech Republic and Lithuania, further with France and Austria, with Sweden and Denmark, and with Poland and the Slovak Republic, because the distances between these countries achieve the lowest values, i.e. these economies are considerably similar to one another. If we compare the identified results with the conclusion of the EU Commission, we can see that the pairs of economies identified by us belong to the same groups according to potential as well as real dangers of macroeconomic imbalance.

If we continue the clustering process we will see that up to the linking distance of 100 clusters are characterised by a very high level of similarity. The subsequent clustering creates groups of states that are more differentiated. However the distance between 287.9 and 370.2 represented by four clusters in total is very interesting. We chose the distance of 300 for our subsequent detailed analysis. The most similar cluster is formed by Romania, the Slovak Republic, Poland, Lithuania and the Czech Republic. The second cluster is the most numerous one as to the quantity of included states and is composed of eleven countries; namely Slovenia, Finland, Austria, France, Italy, Germany, Greece, Hungary, Latvia, Estonia and Bulgaria. The third created cluster is composed of economies that are encountering very serious economic problems, namely these are Portugal, Spain, Cyprus and Ireland. The remaining countries, i.e. the United Kingdom, the Netherlands, Malta, Sweden, Denmark, Luxemburg and Denmark, represent the last cluster. The stated facts are also manifested by the dendrogram, presented below, of hierarchical clustering of the EU members' economies on the basis of their values for the ten key macroeconomic balance indicators.

Fig. 1: The dendrogram of hierarchical clustering



Source: the author according to data from [7].

Before we proceed to compare the clusters created by us with the AMR conclusions it is necessary to take out those economies from the determined clusters that are already under extended surveillance from the EU, i.e. Ireland, Portugal, Greece and Romania. Thus if Romania is not considered in the first cluster, all the remaining countries in the cluster belong among those that are not to undergo detailed analysis according to the Commission's decision. Similar conclusions may also be drawn on the basis of the composition of the third cluster, which is only composed of economies that are to undergo detailed analysis, if we apply the aforementioned assumption, namely Spain and Cyprus. Unfortunately we do not arrive at such unambiguous results with the remaining two clusters, even if we eliminate Greece, which is already under extended surveillance from the EU. This is to say that the second and the fourth cluster are mainly formed by economies that require detailed analysis in the EU's view, however they also include countries for which such surveillance is not planned for the nearest period to come.

The chosen multidimensional statistic method, cluster analysis, has sorted out the EU countries into clusters on the basis of the similarity of identified empirical data. Since this method did not focus on the fulfilment of the informative threshold values, not all our conclusions are identical with the those of the EU Commission.

Conclusion

The issue of macroeconomic balance, or in other words the issue of internal and external imbalances and competitiveness, of economies not only in the EU has been a frequently discussed topic in recent years and that especially in relation to the membership of countries in the EU, however also in relation to the future existence of the EMU as such.

The seriousness of the macroeconomic situation in the EU is manifested, among other things, by the so-called Excessive Imbalance Procedure, which became effective in December 2011. Based on this procedure the EU Commission has created, after consultations with the European Parliament, the European Council and the European Systemic Risk Board, the historically first Alert Mechanism Report, which defines a set of ten indicators of internal and external imbalances and competitiveness and, on the basis of empirical data from all the EU member countries for 2010, decided on the detailed analysis of twelve economies with the objective to look into their various macroeconomic problems in detail.

In the end of this paper macroeconomic balance indicators were analysed on the basis of the cluster method with the objective to confirm or refute the conclusions of the EU Commission. The conclusions can be summed up as follows: the most similar economies undoubtedly are the Czech Republic and Lithuania, France and Austria, Sweden and Denmark, Poland and the Slovak Republic. Our conclusions agree with the Alert Mechanism Report since the mentioned pairs have found themselves in the same groups according to the necessity for further analyses. After creating clusters, applying the distance of 300, and while neglecting those economies that are already under the EU surveillance, we can see that two clusters are typical by their homogeneity. The remaining clusters are mostly formed by economies that require detailed analysis according to the EU; however they also include countries that are not under surveillance at the moment.

Although the mentioned statistical method has led to the presented conclusions, we have to bear in mind that the created clusters were only composed on the basis of the empirical values of the ten macroeconomic indicators; however no weight was given to their fulfilment, i.e. the informative threshold values. This is the reason why not all conclusions presented by us are identical with the Alert Mechanism Report.

Based on the very results received from the executed statistic analysis the next goal of our work has been determined, which lies in the selection of a more suitable statistic method that would take into consideration the wider context and the determined informative threshold values and that would help to verify the opinion of the EU Commission that the set of macroeconomic balance/imbalance indicators has not been determined on a too rigid basis.

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Received: 28. 04. 2012
Reviewed: 29. 06. 2012
Approved for publication: 01. 11. 2012